REMARKS

This Amendment is in response to the Final Office Action dated August 3, 2007 ("OA"). In the Office Action, claims 1, 5, 6, 10-13, 15-17, 20, 21, 24, 25, 28, 29 and 30 were rejected under 35 USC §103. By this amendment, claims 5, 15, 21, 25 and 29 are cancelled and claims 13 and 17 are amended. Claims 1, 6, 10-13, 16-17, 20, 24, 28 and 30 are believed allowable, with claims 1, 6, 10 and 16 being independent claims.

CLAIM REJECTIONS UNDER 35 USC §103:

Claims 1, 20 and 24 were rejected under 35 USC §103 as unpatentable over U.S. Patent No. 5,592,231 issued to Clatanoff et al. ("Clatanoff") in view of Greggain. OA, pg. 17.

Claims 5, 15, 21, 25 and 29 were rejected under 35 USC §103 as unpatentable over U.S. Patent No. 5,875,268 issued to Miyake ("Miyake") in view of U.S. Patent No. 6,020,863 issued to Taylor ("Taylor"). OA, pg. 4.

Claim 6 was rejected under 35 USC §103 as unpatentable over U.S. Patent No. 5,917,963 issued to Miyake ("Miyake") in view of U.S. Patent No. 6,285,798 issued to Lee ("Lee"). OA, pg. 7.

Claims 10, 11, 13, 16, 17, 28 and 30 were rejected under 35 USC §103 as unpatentable over U.S. Patent No. 6,295,091 issued to Huang ("Huang") in view of U.S. Patent No. 5,991,463 issued to Greggain et al. ("Greggain"). OA, pg. 11.

Claim 12 was rejected under 35 USC §103 as unpatentable over Huang in view of Greggain and further in view of U.S. Patent No. 6,084,560 issued to Miyamoto ("Miyamoto"). OA, pg. 16.

A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 1

Claim 1 recites, in part, ". . . reducing correlation in the vertical and horizontal directions of an image that is linearly expanded in the vertical and horizontal directions to generate first image data . . . ." Thus, claim 1 requires that an image is linearly expanded in both the vertical and the horizontal directions.

The Examiner alleges that an "interpolation process" disclosed at col. 1, ln. 47-48 of Clatanoff teaches "an image that is linearly expanded" as required by claim 1. OA, pg. 17. The language cited by the Examiner is found in the sentence, "These visual artifacts are due to an interpolation process that does not take into consideration the actual edge content of the data." Clatanoff, col. 1, ln. 47-49. The Applicants respectfully submit that this passage of Clatanoff fails to teach or suggest that the interpolation process is performed in both the vertical and horizontal directions.

The following passage provides additional detail about the interpolation process disclosed by Clatanoff:

> An additional problem is that most conventional televisions use an interlaced format, where the display device draws every other line during one interval, then draws the missing lines in the second interval. In a digital television using such techniques as progressive scan, where every line is "drawn" during the same interval, the missing data from the second interval must be interpolated. Interpolation of moving objects creates artifacts, or visual images that have errors in them. Clatanoff, col. 1, ln. 26-34.

The cited passage teaches that missing data from a second interval must be interpolated. Furthermore, the cited passage teaches that entire lines are missing. Thus, for any pixel on a missing line, the pixels positioned in the same direction as the line relative to the missing pixel are also missing. This teaches away from interpolation in the direction of the line because the pixels with which interpolation would be performed are absent from the original image data. Thus, Clatanoff teaches away from interpolating in both the vertical and horizontal directions.

It is noted that the inventions of both Clatanoff and Huang are directed to processing interlaced video data. Accordingly, the extensive discussion of interlaced video in regards to claim 10 and the invention of Huang applies equally to claim 1 and the invention of Clatanoff.

For the foregoing reasons, the Applicants respectfully submit that Clatanoff fails to teach or suggest linearly expanding an image in both the vertical and horizontal directions.

The Examiner further alleges that the language "eliminate artifacts" disclosed at col. 2, ln. 31 of Clatanoff teaches reducing correlation. OA,

pg. 17. The Applicants respectfully submit that this allegation amounts to a conclusory statement unsupported by articulated reasoning or rational underpinning. The Examiner argues that the claim element is found in Clatanoff by merely copying the claim element and citing a column and line in Clatanoff in parentheses. The rejection does not provide a comprehensive explanation of why the Examiner considers "reducing correlation" as required by claim 1 to be disclosed in Clatanoff. The Applicants are left guessing what the Examiner was thinking when making the rejection. If the rejection of claim 1 is maintained, the Applicants request that a detailed explanation of disclosed structures relied upon in Clatanoff be clearly articulated by the Examiner in accordance with 37 CFR 1.104(c)(2).

The Examiner further alleges that the output of fig. 2, num. 28, labeled "K", is equivalent to the first expanded image data required by claim 1. OA, pg. 17. Clatanoff teaches that "SVP #1 produces three signals. The first signal is k' at line 26. It is delayed one field and reprocessed to aid in the production of the motion signal k at line 28." Clatanoff, col. 2, ln. 51-53. Thus, it is evident that the value labeled "K" and output by fig. 2, num. 28 is a motion signal. Clatanoff does not teach or suggest that the motion signal constitutes expanded image data. To the contrary, Clatanoff discloses the following method for calculating the motion signal:

> A graphical representation of this motion signal determination is shown in FIGS. 3a and 3b. The field difference is found by comparing the current field with the twice-delayed field at the difference sign in FIG. 3a. The interpolated pixel X is determined using the motion signal k, in conjunction with the spatial neighbor pixels of X, as well as pixel Z from the previous field, in FIG. 3b. This diagram brings together the concepts of edge information and the motion signal which will be discussed further in reference to FIG. 5.
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> Because the comparison value is a signed number, it has nine bits. By taking the absolute value of the value at `ABS` 42, this is reduced to an eight-bit number. The nonlinear function `NL` 44 then reduces the eight bits to four for passage into the median filter 45. Clatanoff, col. 3, ln. 22-35.

The Applicants respectfully submit that the motion signal, calculated according to the method disclosed in the cited passage, is clearly not equivalent to expanded image data.

Claim 1 further recites, ". . . calculating a left oblique difference using the target pixel and the first neighboring pixel . . . ." It is noted that in the Office Action, the Examiner assigned the number "b21" to this claim limitation. It is emphasized that the antecedent basis of "the target pixel" is found in "a target pixel" as recited in the limitation numbered "b" by the Examiner.

Claim 1 further recites, ". . . calculating a right oblique difference using the target pixel and the second neighboring pixel . . . ." It is noted that in the Office Action, the Examiner assigned the number "b22" to this claim limitation. It is emphasized that the antecedent basis of "the target pixel" is found in "a target pixel" as recited in the limitation numbered "b" by the Examiner. Thus, it is evident that the target pixel in limitation "b22" is the same target pixel as in limitation "b21".

The Examiner alleges that the directional difference AF shown in fig. 5 of Clatanoff teaches limitation "b21" of claim 1. OA, pg. 18. The Examiner further alleges that the directional difference CD shown in fig. 5 of Clatanoff teaches limitation "b22" of claim 1. *Id*.

As previously noted, the target pixel used in limitation "b22" of claim 1 must be the same as the target pixel used in limitation "b21". It is evident from fig. 5 of Clatanoff that the directional difference AF is calculated based on the pixels A and F and that the directional difference CD is calculated based on the pixels C and D. However, neither pixel A nor pixel F is used to calculate the directional difference CD. Similarly, neither pixel C nor pixel D is used to calculate the directional difference CD. Therefore, none of the pixels A, C, D and F can be equivalent to the target pixel because none of these pixels are used to calculate both the directional difference AF and the directional difference CD. It follows that selecting the directional difference AF as the left oblique direction and the directional difference CD as the right oblique direction fails to teach both limitations "b21" and "b22" of claim 1.

For at least these reasons, claim 1 is believed allowable. The Applicants respectfully request reconsideration and allowance of claim 1.

Claims 20 and 24

Claims 20 and 24 are dependent on and further limit claim 1. Since claim 1 is believed allowable, claims 20 and 24 are also believed allowable for at least the same reasons as claim 1.

Claim 6

Claim 6 recites, in part, ". . . determining, for said expanded image, whether the contrast in said original image data can be maintained at a predetermined level . . ." Thus, claim 6 requires determining whether the contrast in original image data can be maintained at a predetermined level. It is emphasized that this is different than specifying that the contrast in the original image data can be maintained at a predetermined level.

In rejecting claim 6, the Examiner alleges that Miyake '963 teaches maintaining the contrast of an image at a predefined level. Assuming, *arguendo*, that this is the case, Miyake '963 nonetheless fails to teach determining whether the contrast in original image data can be maintained at a predetermined level.

The passage cited by the Examiner recites:

> FIG. 19 shows edge generation in a case where a=4. Herein, since the transition line h(k) has an increased contrast, it is necessary to establish limitation for a density value. In FIG. 19, the aforementioned MAX and MIN values are set as the limitation values. The portion indicated by a bold line is the newly generated high resolution data of a pixel-block of interest. Miyake '963, col. 14, ln, 12-18.

The Applicants respectfully submit that the cited passage fails to teach or suggest maintaining contrast at a predetermined value. The "limitation" cited by the Examiner is applied to a density value as opposed to the contrast per se. Furthermore, even if setting the limitations values to the MAX and MIN values causes the contrast to be decreased, it is not evident why doing so inherently causes the contrast to equal a predetermined level.

For at least these reasons, the Applicants respectfully submit that claim 6 is not obvious in view of Miyake and Lee and earnestly solicit allowance of the claim.

Claim 10

Claim 10 recites, in part, ". . . vertical and horizontal directional interpolation means for interpolating said original image data in the vertical and horizontal directions . . . ." It is noted that in the Office Action, the Examiner assigned the number "b" to this claim limitation. It is emphasized that claim 10 requires interpolation in both the vertical direction and the horizontal direction.

The Examiner alleges that "the horizontal and vertical arrows of fig. 5" of Huang teach the cited limitation of claim 10. OA, pg. 11.

Fig. 1 of Huang and the description thereof provide context information on which fig. 5 is based. The following passage describing fig. 1 is particularly relevant:

> National Television Standards Committee (NTSC) video is constructed of alternating odd and even fields of scan lines. The odd and even scan lines are alternatingly displayed in an interlaced manner to display a full motion video. A pair of consecutive (odd and even) video fields are often referred to as a video frame.
>
> FIG. 1 graphically illustrates how a video frame is constructed. A first set of odd scan lines are first scanned onto the display. After the odd scan lines have been scanned, the even scan lines are scanned in between each of the odd scan lines as illustrated in FIG. 1. A next sequential set of odd scan lines are then scanned. The even and odd scan lines continue alternating to construct a motion video image.
>
> To display an interlaced video image on a computer monitor, the interlaced video must first be de-interlaced since computer monitors display information in a progressive (every line is scanned each frame) format. Specifically, an odd video field consisting of only odd scan lines must have the missing even scan lines filled and an even video field consisting of only even lines must have all the odd scan lines filled. This process is known as line-doubling. Huang, col. 2, ln. 58 through col. 3, ln. 11.

Additionally, fig. 1 of Huang shows that both the odd scan lines and the even scan lines are horizontal. It is evident from the cited passage and from fig. 1 that Huang teaches a method wherein the pixels of a missing horizontal scan line are filled. It is emphasized that for any pixel in a missing horizontal scan line, the pixels positioned horizontally relative to the missing pixel are also missing. This teaches away from horizontal

interpolation because the pixels with which horizontal interpolation would be performed are absent from the original image data.

Returning now to fig. 5 of Huang, on which the Examiner's rejection is based, Huang teaches that "FIG. 5 illustrates a method of interpolating missing scan lines that is similar to the method of FIG. 4 except that information from the previous field is used to help interpolate the missing scan lines." Huang, col. 3, ln. 57-60. Huang expresses the interpolation of fig. 5 in terms of the following mathematical equation, which is disclosed at col. 4, ln. 3-4:

PixelOut = Motion * [(PixelAbove + PixelBelow) / 2]
+ (1 - Motion) * PixelPrevious

Huang expresses an alternate version of the interpolation in terms of another mathematical equation, which is disclosed at col. 4, ln. 15:

PixelOut = Median(PixelAbove, PixelBelow, PixelPrevious)

In the equations above, PixelAbove is defined as the "pixel above". Huang, col. 3, ln. 44-45. PixelBelow is defined as the "pixel below". Huang, col. 3, ln. 45. PixelPrevious is defined as "the <u>matching</u> pixel from the previous field". Huang, col. 3, ln. 25-26 (emphasis added.) PixelOut is defined as "the pixels for each missing scan line." Huang, col. 3, ln. 24.

Thus, it is evident that Huang teaches interpolating a pixel based on the pixels positioned vertically relative to the pixel being interpolated and the matching pixel from the previous field. However, absent from either equation is any pixel which is positioned horizontally relative to the pixel being interpolated. Furthermore, nowhere else in the description of fig. 5 of Huang is found any teaching or suggestion of horizontal interpolation.

Moreover, the Applicants respectfully submit that the horizontal arrows shown in fig. 5 of Huang fail to teach or suggest horizontal interpolation. Each horizontal arrow shown in fig. 5 of Huang originates from a figure consisting of an "X" inside a square. A legend specifies that each such

figure represents a "[p]ixel from previous even field." Huang, fig. 5. Employing pixels from a previous field is clearly not equivalent to horizontal interpolation. It is further noted that fig. 5 of Huang does not specify the meaning of the horizontal axis. Thus, a horizontal arrow in fig. 5 is not inherently equivalent to horizontal movement.

Furthermore, Huang confirms: "All of the methods of line-doubling . . . only the pixels above, below and from the previous field are taken into consideration." Huang, col. 4, ln. 20-24. It is emphasized that the list of pixels taken into consideration is closed-ended and fails to include horizontal pixels. Because horizontal pixels are not taken into consideration, it is evident that horizontal interpolation does not occur. Furthermore, because Huang's statement is made at the end of the discussion of fig. 5, it clearly applies to all the teachings disclosed regarding fig. 5. Therefore, the Applicants respectfully submit that fig. 5 of Huang does not disclose horizontal interpolation.

Claim 10 further recites, in part, ". . . vertical and horizontal directional correlation reduction means for reducing correlation of the obtained image in the vertical and horizontal directions . . . ." It is noted that in the Office Action, the Examiner assigned the number "c" to this claim limitation.

It is well settled that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336, quoted with approval in KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007).

The Examiner alleges that fig. 10, num. 1040 of Huang teaches a vertical and horizontal directional correlation reduction means. OA, pg. 11. Fig. 10, num. 1040 of Huang is labeled, "median selector." The Applicants respectfully submit that this allegation amounts to a conclusory statement unsupported by articulated reasoning or rational underpinning. The Examiner argues that the claim element is found in Huang by merely copying the claim element and citing a figure and number in Huang in parentheses. The rejection does not provide a comprehensive explanation of why the Examiner considers the "vertical and horizontal directional correlation reduction means" required by claim 10 to be disclosed in Huang. The Applicants are

left guessing what the Examiner was thinking when making the rejection. If the rejection of claim 10 is maintained, the Applicants request that a detailed explanation of disclosed structures relied upon in Huang be clearly articulated by the Examiner in accordance with 37 CFR 1.104(c)(2).

Moreover, In making a *prima facie* case of equivalence, the Examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent. MPEP 2183.

The Examiner further alleges that "'stair-step artifacts' in col. 4, line 20 and shown in fig. 8b that are processed to create an 'even diagonal dark edge' in col. 6, lines 5,6" teaches reducing correlation. OA, pg. 11. However, the Examiner has not explained, and it is not apparent, why processing stair-step artifacts to create an even diagonal dark edge is equivalent to reducing correlation.

Claim 10 further recites, ". . . calculating a left oblique difference using the target pixel and the first neighboring pixel . . . ." It is noted that in the Office Action, the Examiner assigned the number "e1" to this claim limitation. It is emphasized that the antecedent basis of "the target pixel" is found in "a target pixel" as recited in the limitation numbered "d" by the Examiner.

Claim 10 further recites, ". . . calculating a right oblique difference using the target pixel and the second neighboring pixel . . . ." It is noted that in the Office Action, the Examiner assigned the number "e2" to this claim limitation. It is emphasized that the antecedent basis of "the target pixel" is found in "a target pixel" as recited in the limitation numbered "d" by the Examiner. Thus, it is evident that the target pixel in limitation "e2" is the same target pixel as in limitation "e1".

The Examiner alleges that fig. 10, num. 1030 of Huang teaches both limitations "e1" and "e2" of claim 10. OA, pg. 12. Fig. 10, num. 1030 of Huang recites the following text:

> Select minimum from
> | PixelAboveLeft - PixelBelowRight |
> | PixelAbove - PixelBelow |
> | PixelAboveRight - PixelBelowLeft |
> and use the minimum pair as outputs. Huang, fig. 10, num. 1030.

As previously noted, the target pixel used in limitation "e2" of claim 10 must be the same as the target pixel used in limitation "e1". Fig. 10, num. 1030 of Huang lists three different calculations. However, no single pixel disclosed is common to two of the calculations. It follows that no pixel disclosed in fig. 10, num. 1030 can be equivalent to the target pixel. Therefore, the Applicants respectfully submit that fig. 10, num. 1030 cannot teach both limitations "e1" and "e2" of claim 10.

For at least these reasons, claim 10 is believed allowable. The Applicants respectfully request reconsideration and allowance of claim 10.

Claim 11

Claim 11 is dependent on claim 10 and recites, "The image processing apparatus according to claim 10, further comprising: generation means for generating expanded image data based on an image obtained by said vertical and horizontal directional correlation reduction means and an image obtained by said oblique directional interpolation means."

The Examiner alleges that fig. 10, num. 1050 of Huang teaches the generation means required by claim 11. OA, pg. 14. The Examiner further alleges that fig. 10, num. 1040 of Huang teaches both the image obtained by said vertical and horizontal directional correlation reduction means and the image obtained by said oblique directional interpolation means. *Id.*

The following passage discusses the schematic shown in fig. 10 of Huang:

> FIG. 10 illustrates a block diagram implementation of the second embodiment. As illustrated in FIG. 10 the pixels from the current field are first used to select a minimum variance direction in logic 1030. From the minimum variance logic 1030, the pixel pair from the direction with the minimum variance are output to median selector and a multiplexor. Also going to the median selector 1040 and the multiplexor 1050 is the pixel from the previous frame. The median selector 1040 then selects the median pixel from the previous field the pixel from the minimum variance direction above and the pixel from the minimum variance direction below. Once this median is selected, the median selection is used to control multiplexor 1050 to output the interpolated pixel. Huang, col. 6, ln. 7-20.

The cited passage teaches that three distinct values are input to the multiplexor shown as fig. 10, num. 1050 of Huang. The first two values are the "pixel pair from the direction with the minimum variance" as selected at fig. 10, num. 1030. Fig. 10, num. 1030 was discussed above in regards to claim 10. It is evident from this discussion that both pixels in the selected pair existed in the original image data. The third value is "the pixel from the previous frame." This pixel similarly existed in original image data, albeit that of a previous frame. Because all three values existed in the original image data, all three values are clearly not equivalent to any part of an image obtained by a vertical and horizontal directional correlation reduction means. For the same reason, all three values are clearly not equivalent to any part of an image obtained by an oblique directional interpolation means. Because the multiplexor of fig. 10, num. 1050 of Huang receives as input neither an image obtained by a vertical and horizontal directional correlation reduction means nor an image obtained by a oblique directional interpolation means, the multiplexor clearly cannot be equivalent to the generating means required by claim 11.

The cited passage clearly states that the same values are input to the median selector shown as fig. 10, num. 1040 as are input to the multiplexor. Thus, the argument above applies equally to the median selector. It follows that the median selector likewise clearly cannot be equivalent to the generating means required by claim 11.

For at least these reasons, claim 11 is believed allowable. The Applicants respectfully request reconsideration and allowance of claim 11.

<u>Claims 13 and 28</u>

Claims 13 and 28 are dependent on and further limit claim 10. Since claim 10 is believed allowable, claims 13 and 28 are also believed allowable for at least the same reasons as claim 10.

<u>Claim 16</u>

Claim 16 is rejected under the same rationale as claim 10. OA, pg. 14. Thus, claim 16 is believed allowable for at least the reasons provided above regarding claim 10. The Applicants therefore respectfully request reconsideration and allowance of claim 16.

Claim 17

Claim 17 has been amended and now recites:

> The image processing apparatus according to claim 16, wherein determining the interpolation direction further comprises:
>
> reading pixels in a mask around a point;
>
> calculating a left cumulative value by summing pixel difference values for the left oblique direction;
>
> calculating a right cumulative value by summing pixel difference values for the right oblique direction;
>
> determining the vertical and horizontal directions to be interpolation directions when the absolute value of the left cumulative value minus the right cumulative value is smaller than a threshold value;
>
> determining the left oblique direction to be the interpolation direction when the absolute value of the left cumulative value minus the right cumulative value is greater than a threshold value and when the left cumulative value is greater than the right cumulative value; and
>
> determining the right oblique direction to be the interpolation direction when the absolute value of the left cumulative value minus the right cumulative value is greater than a threshold value and when the left cumulative value is smaller than the right cumulative value.

Support for this amendment can be found in at least fig. 7 and pg. 33, ln. 11 through pg. 34, ln. 21 of the specification. It is noted that the cited passage describes the cited figure.

The Applicants respectfully submit that Greggain fails to disclose all limitations required by the amended form of claim 17. In particular, figs. 23A and 23B of Greggain show a flowchart for determining an interpolation direction. The method steps shown in this flowchart are clearly not equivalent to the limitations required by claim 17.

As a specific counterexample, the final limitation of claim 17 requires determining the right oblique direction to be the interpolation direction when the absolute value of the left cumulative value minus the right cumulative value is greater than a threshold value and when the left cumulative value is smaller than the right cumulative value. Suppose that this condition is true. Suppose also that each right oblique direction has a boundary crossing situation. Fig. 23A, num. 218 of Greggain teaches determining whether a given direction has a boundary crossing situation. Fig. 23A, num. 220 of Greggain teaches removing directions thus determined

from consideration. Thus, in this counterexample, each right oblique direction is removed from consideration. The right oblique direction is therefore not determined to be the interpolation direction as required by claim 17.

For at least these reasons, claim 17 is believed allowable. The Applicants respectfully request reconsideration and allowance of claim 17.

Claim 30

Claim 30 is dependent on and further limits claim 16. Since claim 16 is believed allowable, claim 30 is also believed allowable for at least the same reasons as claim 16.

Claim 12

Claim 12 recites, "The image processing apparatus according to claim 11, further comprising: input means for entering, as an adjustment value, the personal preference of a user concerning image quality, wherein said generation means employs said adjustment value to synthesize said image obtained by said vertical and horizontal directional correlation reduction means with said image obtained by said oblique directional interpolation means." Thus, claim 12 requires that the generation means employs the adjustment value.

The Examiner alleges that fig. 1, num. 11 of Miyamoto teaches the generation means recited in claim 12. OA, pg. 16. The Applicants respectfully submit that this allegation amounts to a conclusory statement unsupported by articulated reasoning or rational underpinning. The Examiner argues that the claim element is found in Miyamoto by merely copying the claim element and citing a figure and number in Miyamoto in parentheses. The rejection does not provide a comprehensive explanation of why the Examiner considers the "generation means" required by claim 10 to be disclosed in Miyamoto. The Applicants are left guessing what the Examiner was thinking when making the rejection. If the rejection of claim 12 is maintained, the Applicants request that a detailed explanation of disclosed structures relied upon in Miyamoto be clearly articulated by the Examiner in accordance with 37 CFR 1.104(c)(2).

The following passage describes fig. 1, num. 11 of Miyamoto:

An interpolation/gradation control circuit 11 has a function which, in

> a case where the display dots and number of lines of the display unit 13 differ from the display dot data and line data in the input video signal after dither halftoning, is for producing data for display on the display unit 13 by interpolating the portion between them that is different, and a function which, in a case where the display dots and number of lines of the display unit 13 are greater, by a whole-number multiple, than the display dot data and line data in the input video signal after dither halftoning, is for increasing the number of tones by enlarging the input data and executing area gradation processing. Miyamoto, col. 5, ln. 16-28.

The Applicants respectfully submit that the cited passage fails to teach or suggest employing an adjustment value to synthesize an image obtained by a vertical and horizontal directional correlation reduction means with an image obtained by an oblique directional interpolation means. This is evident because the cited passage does not disclose synthesizing two images.

The Examiner further alleges that fig. 1, num. 14 of Miyamoto teaches the adjustment value recited in claim 12. OA, pg. 16. The Examiner additionally alleges that fig. 1, num. 15 of Miyamoto teaches the personal preference of a user. *Id.* The following passage describes fig. 1, num. 14 and fig. 1, num. 15 of Miyamoto:

> A user trimmer 15 allows the user to control image quality and screen position, etc. An image-quality/position adjusting circuit 14 converts the analog information from the user trimmer 15 to a digital signal and outputs the screen capture-position information that has been converted to the digital signal as well as gamma correction information, brightness and contrast information. Miyamoto, col. 5, ln. 39-46.

As previously noted, claim 12 requires that the generation means employs the adjustment value. The passage of Miyamoto reproduced above discussing the interpolation/gradation control circuit (fig. 1, num. 11) fails to teach or suggest that the interpolation/gradation control circuit employs the user trimmer (fig. 1, num. 15), analog information therefrom or the image-quality/position adjusting circuit (fig. 1, num. 14.) Therefore, the Applicants respectfully submit that assuming *arguendo* that the user trimmer and/or the image-quality/position adjusting circuit teach the adjustment value required by claim 12, the interpolation/gradation control circuit cannot be equivalent to the generation means of claim 12 because it does not employ these values.

For at least these reasons, claim 12 is believed allowable. The Applicants respectfully request reconsideration and allowance of claim 12.

CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should such a fee be required please charge Deposit Account 50-0510 the required fee. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

Respectfully submitted,

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/ido tuchman/

Ido Tuchman, Reg. No. 45,924
Law Office of Ido Tuchman
82-70 Beverly Road
Kew Gardens, NY 11415
Telephone (718) 544-1110
Facsimile (866) 607-8538